

## HOW TO WRITE A LAB REPORT – SCH 4C

Science is a process in which scientists develop ideas and then, through the medium of scientific journal articles, seek to convince the scientific community that their ideas/theories are valid. Learning how to communicate your ideas effectively is a very important skill for a scientist (and is useful in many other professions as well). We will begin our process by following the format outlined below. As the semester progresses, we may make modifications to prepare you for post-secondary studies. Please follow the outline attentively.

### TITLE PAGE

*Every lab will have a title page submitted along with it. The only things that should appear on the title page are:*

- ☐ Title
- ☐ Teacher's Name
- ☐ Student's Name
- ☐ Partner Name(s)
- ☐ Due Date
- ☐ Course Code

### PURPOSE

*This section indicates to the reader what the primary thrust or purpose of the experiment was. It is usually two to three sentences long. It does not tell the reader what the results of the experiment were.*

### MATERIALS

*List all the materials used in the experiment. Whenever possible, list the amounts used.*

### PROCEDURE

*The procedure elaborates on "what you did in the experiment". We will be changing the format slightly in preparing you for post-secondary studies. Unlike what you have done in previous years, the procedure is not a numbered step by step series of instructions but rather summarizes what was done and yet provides enough information so that the experiment may be repeated by others. It is written in past tense and passive voice (this means no use of personal pronouns). Look at the procedure outlined below – you should be able to see how it follows the requirements given here:*

**A ruler was placed, vertically, along a wall and the height from which the filters were to be dropped was measured. The time for each filter to fall from this position to the floor was measured using a stopwatch. Several trials were repeated from the same drop height and the average time of fall was determined. The process was repeated for different drop heights.**

### OBSERVATIONS

*This section of the report includes any data which you measured and/or observed. No inferences appear here. Tables and graphs have numbers given to them although the graphs appear in the analysis section.*

*A sample table is provided for you on the next page.*

**Table 1** *Fall times as a function of height for various coffee filters*

Height (inches)	Small Filter Time Trials (s)						Mean Time (s)		Large Filter Time Trials (s)						Mean Time (s)
64	1.53	1.43	1.30	1.37	1.39	-	1.40		2.10	2.22	1.96	2.14	-	-	2.10
59	1.20	1.53	1.40	1.30	1.40	1.31	1.36		1.84	1.84	1.89	-	-	-	1.85
46	1.25	1.13	1.08	1.06	1.05	0.95	1.09		1.50	1.51	1.65	1.70	1.53	-	1.58
40	0.86	0.98	0.91	0.92	0.97	-	0.93		1.53	1.34	1.45	1.47	1.46	-	1.45
32	0.92	0.81	0.82	0.88	0.92	-	0.87		1.31	1.26	1.23	1.34	1.16	1.16	1.24
26	0.92	0.93	0.70	0.76	0.78	-	0.82		1.11	1.16	1.09	1.16	1.07	-	1.12

## ANALYSIS AND DISCUSSION

The analysis elaborates on what the results tell you. You analyze your data and make your inferences. In discussing your results, use charts/graphs if necessary to communicate what you have learned. The charts/graphs continue the numbered sequence from the observations.

Sometimes additional questions are given. Answer these questions in this section of the report.

## CONCLUSION

Briefly summarize your experiment, focusing on the purpose of the experiment. Did the results answer the purpose? Are the results acceptable? Indicate where errors may have been made that could have affected the outcome of the experiment.